

## Possible Solutions Brainstorming

The following categories were developed from the possible solutions identified by property owners, developers, District staff and the Consultant Team:

- Public Education
- No Further Action
- Regional Retention
- Flood Warning System
- Transportation Corridors
- Culvert Sizing Guidelines
- Additional Regulations/Tools
- Drainage Feature Information
- Detention at Upstream side of CAP
- Major Drainage Corridors Preservation
- Remediation of Roadway Drainage Impacts
- Floodplain Delineation and Erosion Hazard Zones flooding.



## Project Next Steps

The Area Drainage Master Study Update will be finalized and District staff will begin the Master Plan to identify possible alternatives to address flooding and drainage issues in this area. Recommendations for potential flooding and regulatory solutions will be developed; final recommendations will be completed around the Fall of 2006.

## For More Information, Contact:

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# Wittmann Area Drainage Master Study



## Introduction

For more than forty years, the Flood Control District of Maricopa County (District) has provided flood control services to County residents in order to ensure public safety and to protect property in the event of flooding.

County-wide watershed planning efforts are one method the District uses. A watershed is an area from which water drains into a lake, stream, or other body of water. Currently 26 of the 37 watersheds in Maricopa County have been studied and plans made for flood control measures. The Wittmann Area Drainage Master Study encompasses the Trilby Watershed.

Supervisor Max Wilson  
District 4

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## About the Study

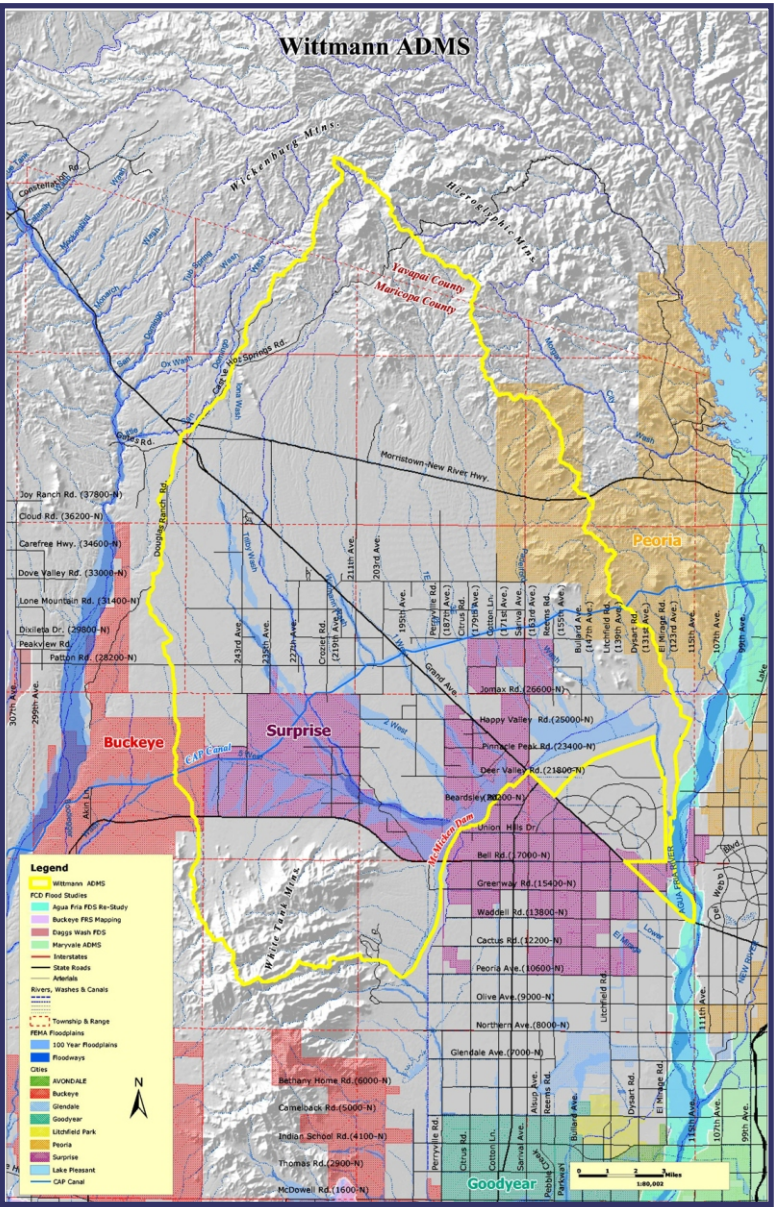
In April 2003, the Flood Control District of Maricopa County began an Area Drainage Master Study (ADMS) Update (updating the 1989 study) for the Trilby Watershed, which includes Morristown, Circle City, Wittmann, parts of the Cities of Surprise and Peoria and a small part of the Town Buckeye. Significant changes in recent years required a study update, which has now been completed.

The Wittmann study area is rapidly growing with 68 percent of the land available for development. As more development occurs, it is critical that it does not increase drainage or runoff in the area. It is more cost effective to put floodplain management solutions in place before development rather than build expensive protective structures after people move in.

The District has conducted an ADMS. This first phase included gathering technical data, identifying area flood and erosion hazards, analysis of McMicken Dam, and identifying possible solutions to address flooding and drainage problems.

The study team also located the limits of floodways and floodplains along 150 lineal miles of washes and watercourses in the area identified special flood and erosion hazard areas.

The second phase of the project is the development of an Area Drainage Master Plan (ADMP). The study team will evaluate the possible solutions and make recommendations for final projects for flood and erosion hazard mitigation. The study team consists of area residents, District staff, consultants, and other agency representatives.



## Study Area

The Trilby Watershed (Wittmann study area) is about 307 square miles, bounded by the White Tank Mountains and McMicken Dam on the south; the Hassayampa River basin on the west; the Beardsley Canal and the Agua Fria River on the east; and the Hieroglyphic Mountains on the north and northeast.

This area is characterized by a sharp contrast between flat plains and mountains, with much of this watershed still retaining its natural vegetation. All water in the watershed eventually drains southeasterly to McMicken Dam at the south end of the study area, and is discharged into the Agua Fria River.

## Issues Identified

Response from citizens indicated that the following were some of the critical concerns in the study area:

- Flooded roads
- Mud and debris
- Isolation by floodwater
- Drainage problems
- Flooded property
- Ponding
- Flooded houses

These and other problems were witnessed and photographed by the Study Team during the storms that occurred in the area. Additional flood hazard issues examined were erosion and sedimentation; subsidence and fissures; unstable areas and alluvial/relic fans; and flow splits on washes.

The Study Team received photographs and videos from property owners that provided further insight for this study. Understanding the importance of keeping the wash flow path clear, residents in Circle City organized several clean up days to remove debris and heavy vegetation from washes around their community. Efforts by residents as well as awareness of staying out of flooded washes are as important as the flood hazard mitigation solutions that will be forthcoming with the second phase of the study meetings.



## Study Results

The Wittmann ADMSU resulted in a number of different products that will be used by the development community, District, and city review staff to assist in keeping people safe from flood and erosion hazards. Additionally the information gathered and produced will be used to determine possible solutions to mitigate flooding in the study area. Those results are as follows:

- New Hydrology for the entire watershed
- Floodplain delineations
- Alternatives to resolve McMicken Dam problems
- Potential solutions meetings.